

Northern Michigan University (Marquette Co, MI)

CS 510-01-24F: Principles Of Programming Languages

Program 2

Due: Monday 11 November 2024 9:00 A.M. EST

Create a directory called “PG2” at the top level of your CS510-01-22F folder on PHILOS. Place your .cpp and .h files (or whatever) inside your PG2 folder along with an empty file or folder named DONE .

Your program should prompt the user for two prime numbers. You don't have to verify that they are prime; you can trust the user. However, the numbers might be very large. These are the two prime numbers for RSA encryption.

Then it should prompt the user for an encryption exponent e . Again, you may assume it's a valid encryption exponent. It should then prompt for a (numeric) message M . It should print out the encrypted message using RSA on (n,e) . You should then ask for an encrypted message M' . Using the decryption exponent d (which you should compute) print out the decrypted message for M' .